

1800

# ELKHORN™

W I S C O N S I N

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WISCONSIN PUBLIC SERVICE  
CITY 414-723-2219

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January 30, 2001

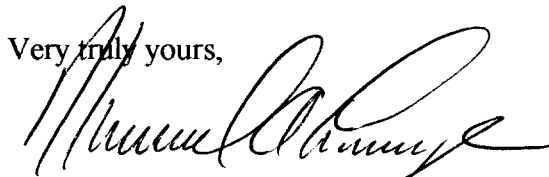
Jim Loock, Chief Electric Engineer  
Public Service Commission  
610 N. Whitney Way  
P.O. Box 7854  
Madison, WI 53707-7854

RE: In the Matter of Filing Plans for Appropriate Inspection and  
Maintenance, PSC Rule 113.0607.

Dear Mr. Loock:

Enclosed for filing are 3 copies of The City of Elkhorn, Electric Department, Preventative Maintenance Plan detailing inspection maintenance schedules, condition rating criteria, corrective action schedules, record keeping procedures and report filing schedules as documented in this rule.

Very truly yours,



Michael A. Lange, Electrical Supervisor  
City of Elkhorn, Electric Department

Enclosures

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FEB 02 2001

Electric Division

WISCONSIN PUBLIC SERVICE  
COMMISSION

# **PREVENTATIVE MAINTENANCE PLAN**

2001 FEB -1 P 3:39

## **CITY OF ELKHORN, ELECTRIC DEPARTMENT**

**FILING DEADLINE**

**FEBRUARY 1, 2001**

January 30, 2001

Michael A. Lange, Electric Supervisor

P. O. Box 920

Elkhorn, WI 53121-0920

262-741-5129

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## **I. Preventative Maintenance Plan**

The PSC 113.0607 rule reads;

Appropriate inspection and maintenance: system reliability.

(1) PREVENTATIVE MAINTENANCE PLAN. Each utility or other person subject to this chapter, including persons who own electric generating facilities in this state who provide service to utilities with contracts of five years or more, shall develop and have in place its own preventative maintenance plan. This section is applicable to electric generating facilities as set forth at s. 194.491(5)(a)(1), Stats. Each plan shall include, among other things, appropriate inspection, maintenance and replacement cycles where applicable for overhead and underground distribution plant, transmission, generation<sup>1</sup>, and substation facilities.

(2) CONTENTS OF THE PLAN. (a) *Performance standard.* The Preventative Maintenance Plan shall be designed to ensure high quality, safe, and reliable service, considering: cost, geography, weather, applicable codes, national electric industry practices, sound engineering judgment and experience.

1 *PSC staff interpretation is that generation applies to individual generators equal to or greater than 50 MW.*

## **II. Inspection Schedule and Methods:**

The purpose of this plan is to maintain or improve the electrical system reliability with the objective of increased municipal loyalty and satisfaction from our constituents. The goals are to meet and exceed the schedules established in this plan.

Exception reporting (inspected equipment not in good condition) will be the method of documentation on all inspection forms.

The scope of this plan is traditional and uses proven maintenance techniques. Unique operating and maintenance philosophies have not been considered. Also, manufacturer defects will be dealt with as they are communicated to this utility.

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Transmission ( $\geq 69\text{Kv}$ and above) N/A			
Substations	<b>X</b>	<b>X</b>	
Distribution (OH & UG)			<b>X</b>

The inspection of Distribution facilities will be by individual substation circuits on a 5-year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included with the plan.

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from objects, trees and other utility cables.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

### **III. Condition Rating Criteria:**

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies.

- 0) Good condition
- 1) Good condition but aging
- 2) Non-critical maintenance required – normally repair within 12 months
- 3) Priority maintenance required – normally repair within 90 days
- 4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

### **IV. Corrective Action Schedule**

The rating criteria as listed above determine the corrective action schedule.

### **V. Record Keeping**

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

### **VI. Reporting Requirements**

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a letter documenting the percent of inspections achieved compared to the schedule and a description of maintenance achieved within the scheduled time allowance.